

ABSTRACT OF THE DISCLOSURE

A system and method for checkpointing a primary computer process to a backup computer process such that if there is a failure of a primary process, the backup process can takeover without interruption. In addition, upgrades to different version of software or equipment can take place without interruption. The invention provides a lightweight checkpointing method that allows checkpointing of only external requests or messages that change the state of the service instance, thereby reducing the overhead and performance penalties. In addition, the present invention checkpoints data for primary and backups that do not share resources but are logically equivalent. All communication between the primary and backup takes places using network protocols.